

**“Walking The Walk”
Is easy on flat ground!!**



Welcome to Montgomery County Fire Rescue Class “B” Apparatus Driver Course





Class “B” Apparatus Drivers Course

Instructor Contact Info Page

Contact Information

301-279-1148 Office

240-499-6087 Cell





Class “B” Apparatus Drivers Course

Report Time is:
All sessions are mandatory



Montgomery County Fire and Rescue

Class “B” Driver Course Session 1-1
Version 08-1



Class “B” Apparatus Drivers Course

Course Requirements

Written Exam 70% Passing

- **Safe Driving Principles**
- **Maryland Motor Vehicle Law**
- **Air Brake Systems**





Class “B” Apparatus Drivers Course

Course Requirements

Practical Exams 70% Passing

- Pre-Trip Inspection
- MCFRS Brake Test
- Skills Course (10 minute maximum time)
- Commentary Driving (Acceptable Evaluation)
- Parallel Parking (5 minute maximum time)
- Remedial Training if you passed the written exam





Class “B” Apparatus Drivers Course

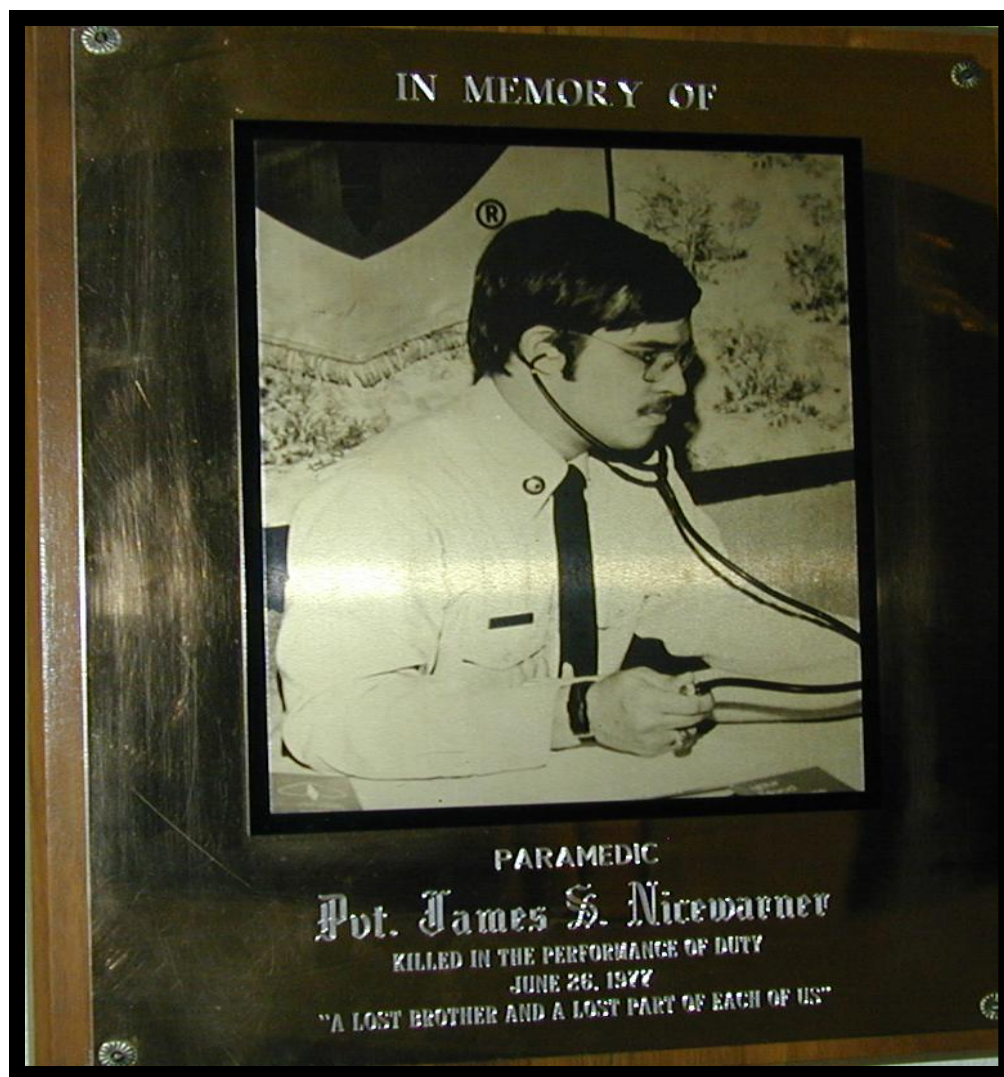
Overview

- Why Class “B” Driver Course
- Driver & Officer Responsibility
- Review Motor Vehicle Statutes
- Legal Definitions
- Safe Vehicle Operation Policy
- Safe Driving Principles





Class "B" Apparatus Drivers Course



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Class “B” Apparatus Drivers Course



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Fatal Collision March 29, 2005



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- **Last Montgomery County On Duty Death?**
- **1977 P/M James Nicewarner**
- **How many civilian deaths since 1977?**
- **7 civilian deaths involving Montgomery County Fire and Rescue Emergency Vehicles**





**In the year 2003, more firefighters were
KILLED in VEHICLE COLLISIONS
than in structural firefighting.**

There were 33

LINE OF DUTY DEATHS

involving collisions

29 LINE OF DUTY DEATHS

fighting fires

24 LODD from Collisions in 2004

28 LODD from fighting fires





NIOSH REPORT

- **Between 2003-2009 1308 civilian workers died in crashes each year according to NIOSH.**
- **Work related roadway crashes kill more employee's each year than any other occupational cause of death.**
- **347 pedestrian workers died each year as a result of being struck by a motor vehicle.**





Law Enforcement Deaths 2004

- ❑ **154 Police Officer Deaths**

- ❑ **72 from Traffic Related Collisions**

"USA Today December 29, 2004"





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obey the sirens.

• The following are excerpts from an article written by Matthew Mosk of the *Washington Post*, headlined "Montgomery Fire, Rescue Crashes Rise": "Drivers of Montgomery County fire trucks and ambulances have had more than 1,100 accidents in the last five years, doing so much damage to the fleet that the Fire and Rescue Service is at risk of losing its insurance coverage, according to county records. ... Montgomery has received warnings from its insurance underwriter that the mounting losses, totaling nearly \$2 million since 1997, "exceed trends from comparably sized fire service clients on both the east coast and the west coast," according to a memo written by the county's fire administrator. Departmental reviews of the most serious accidents, including crashes that left one motorist dead and more than a dozen injured, have found that many could have been avoided had drivers slowed before entering intersections or followed proper procedures as they responded to emergency calls. There

FIREHOUSE
MAGAZINE
NOVEMBER 2003

OUR DEPARTMENT HAS A COLLISION PROBLEM



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COLLISION PROBLEM

- **Everyone must take ownership and be held accountable for our collision problem**
- **Indifference: “It’s always someone else that can’t drive safely.”**
- **We need to change the DRIVING culture of the Fire Service**





Class “B” Apparatus Drivers Course

Our Goal Is to Put MCFRS Drivers In the Best Position Possible to Avoid a Collision and Become a Safer Driver



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Did this change driving behavior?



Did this change driving behavior?





Did this change driving behavior?

Did this change your driving behavior?



Did this change driving behavior?





Did this change driving behavior?

21 Staff Vehicles Involved In Collisions 2004



EMS 1 Collision September 28, 2004

WHAT WILL IT TAKE TO CHANGE YOUR DRIVING BEHAVIORS?



AT8



**THESE EVENTS
CHANGE DRIVER
BEHAVIOR SHORT
TERM**



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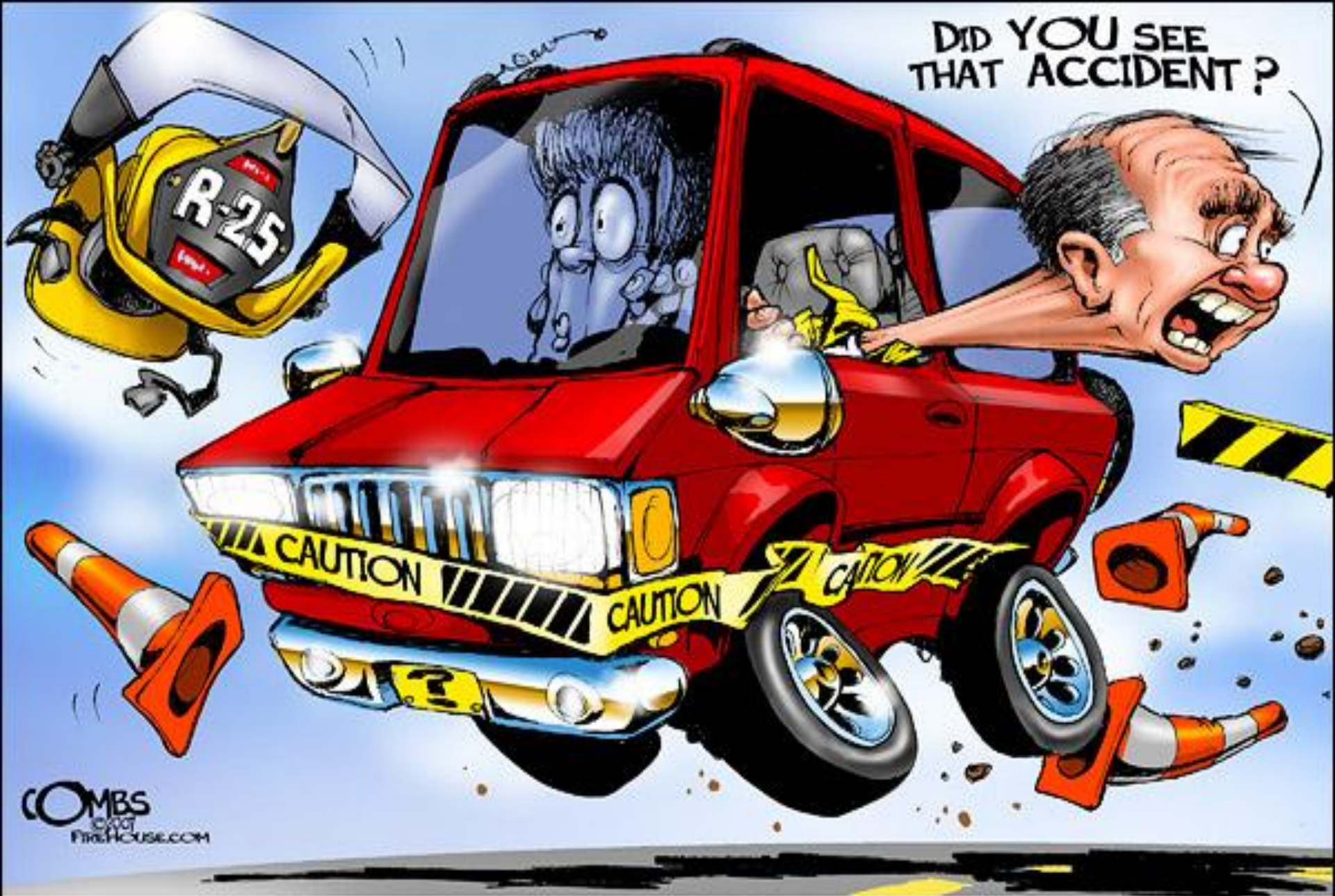
**Hopefully it will not take an event
like this
for you to change!**



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DID YOU SEE
THAT ACCIDENT?



LOOK OUT - BECAUSE THEY'RE NOT!

**Safe driving is not a new concept
for our department.**

**However, it will involve a complete
paradigm shift in all of our driver
behaviors and how we currently
certify personnel to drive
emergency vehicles.**





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VINCENT
BRANNIGAN

“YOU HAVE NO RIGHT
TO RISK PEOPLE’S
LIVES ON THE
HIGHWAY
TO SAVE
PEOPLE WHO MAY BE
TRAPPED IN A FIRE”





BEHAVIOR BASED SAFETY

- Our focus has been on speed since the first day of your training.
- Arriving FAST vs. arriving SAFELY
- If you don't arrive, how can you help!





BEHAVIOR BASED SAFETY

- **Each shift look in the mirror.**

“I am going to do my best to drive safely and avoid a collision today.”





CHANGING BEHAVIOR

- ✓ **Education**
- ✓ **Engineering**
- ✓ **Enforcement**
- ✓ **Positive Peer Pressure**

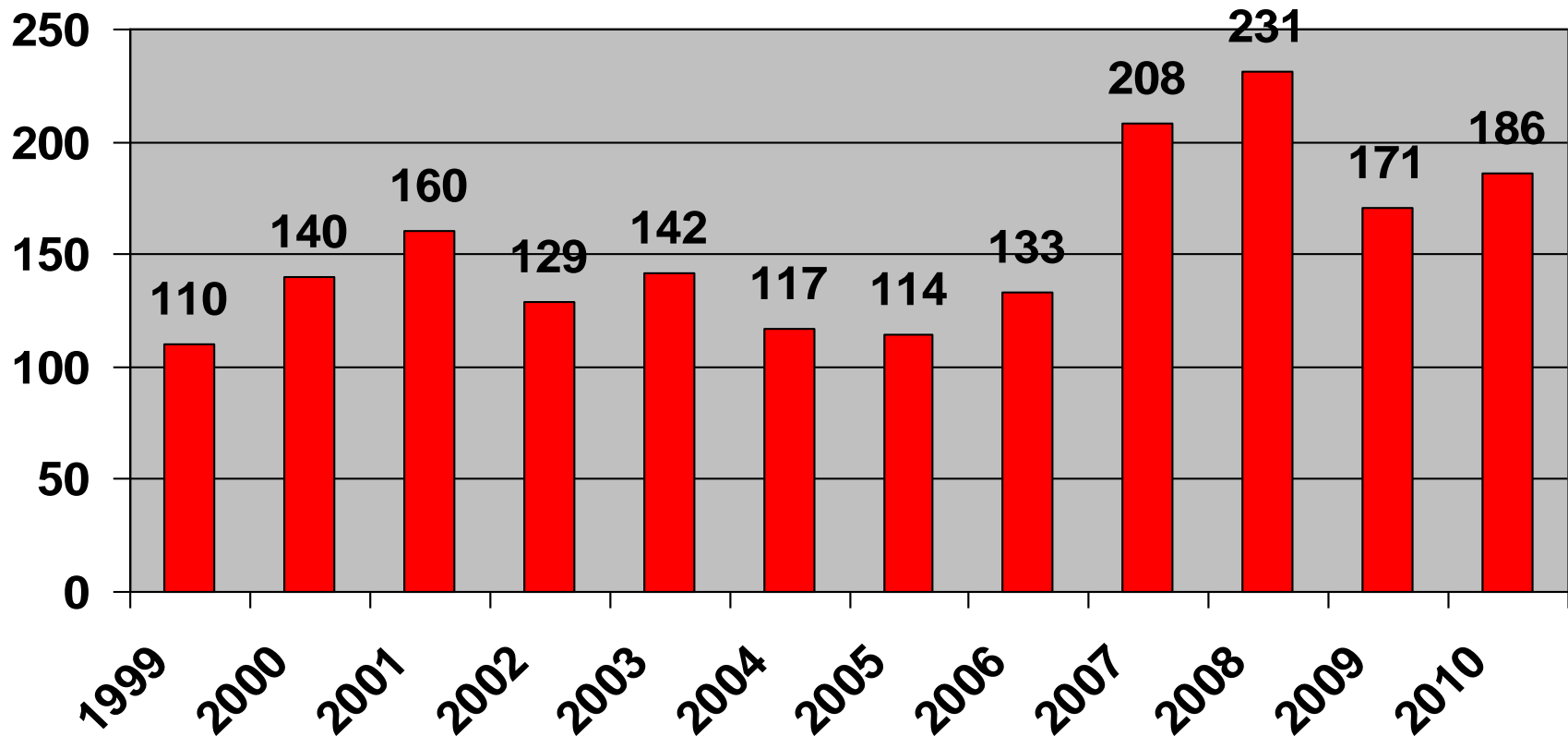




Class "B" Apparatus Drivers Course

Collisions/Incidents

2005 DFRS Data



Montgomery County
Fire and Rescue

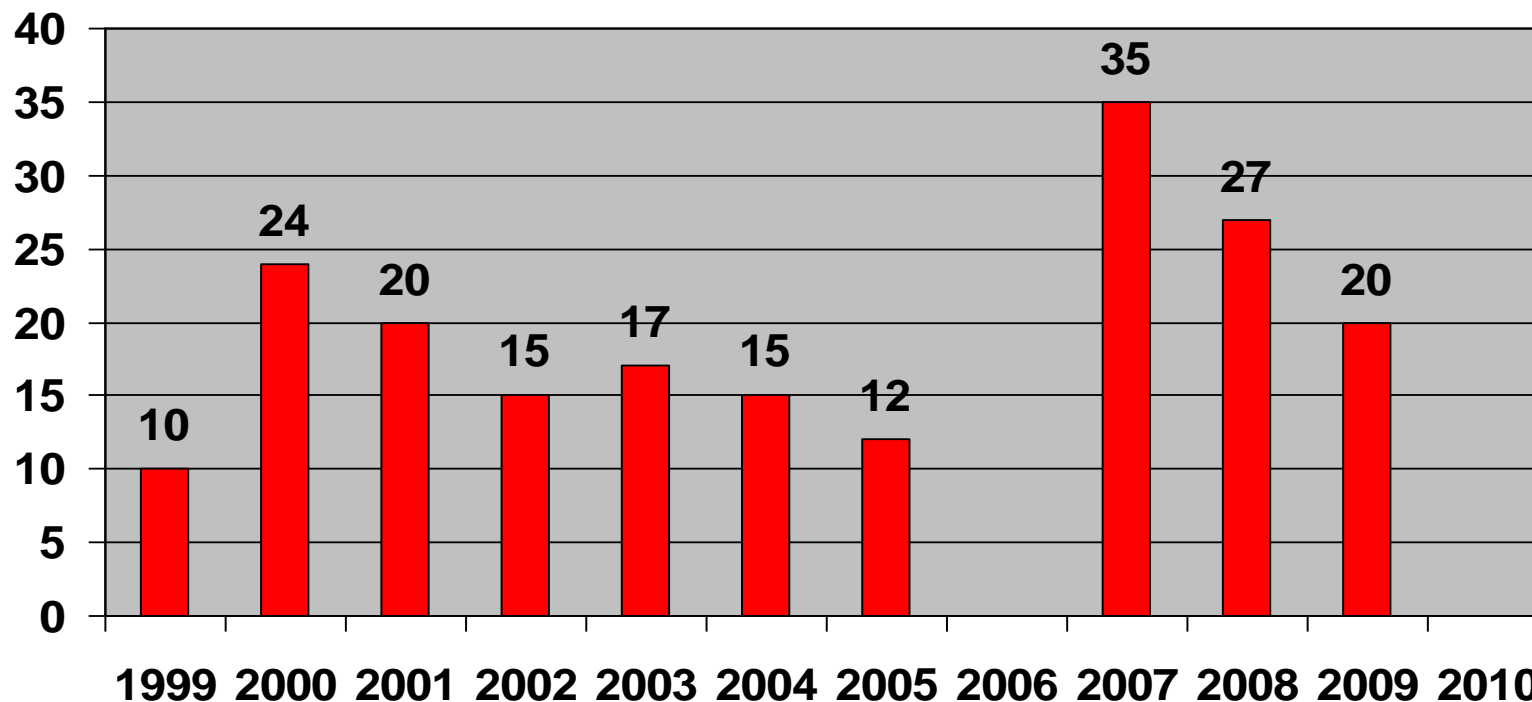
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BACKING INCIDENTS



Montgomery County Fire and
Rescue

Montgomery County Fire and Rescue
EVS - Introduction

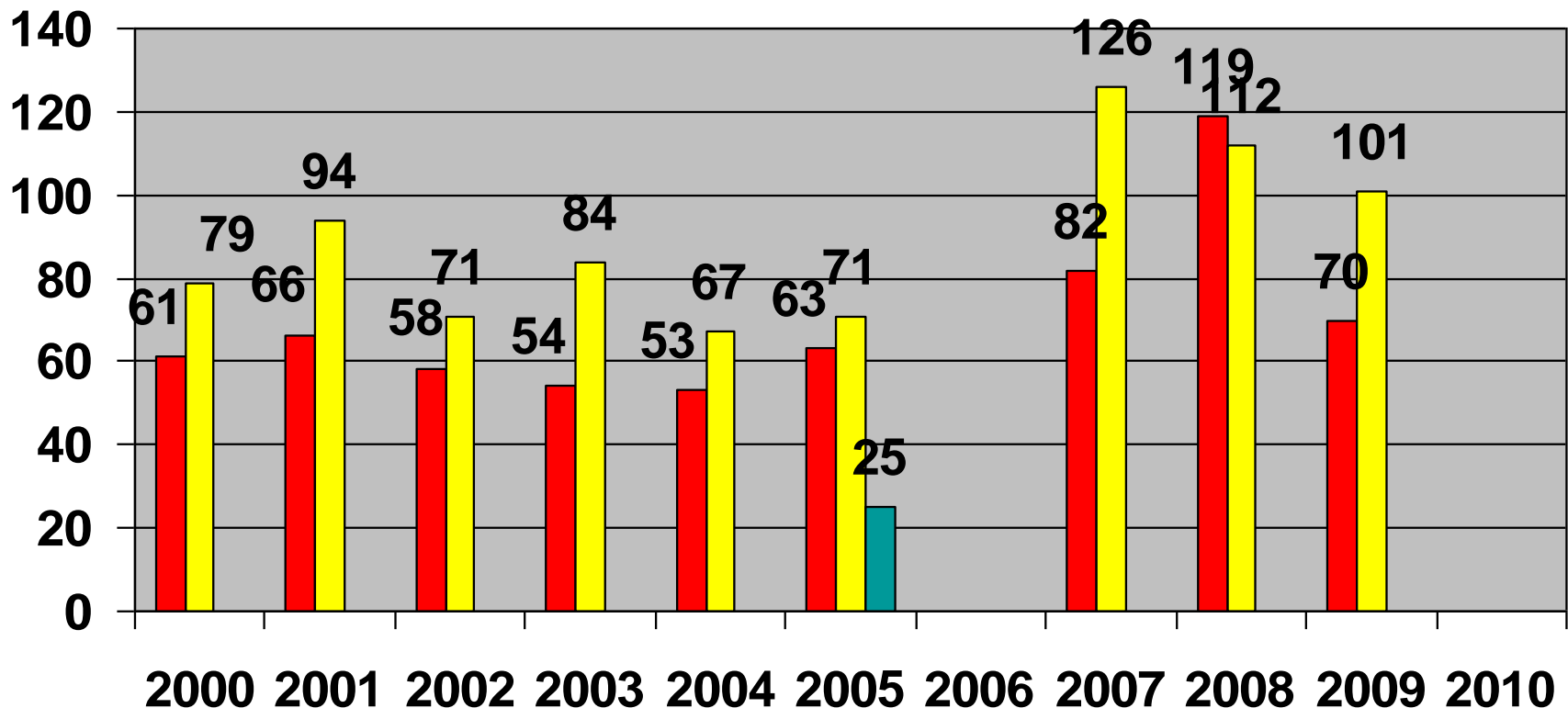
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EMS/OTHER UNITS VS. HEAVY APPARATUS



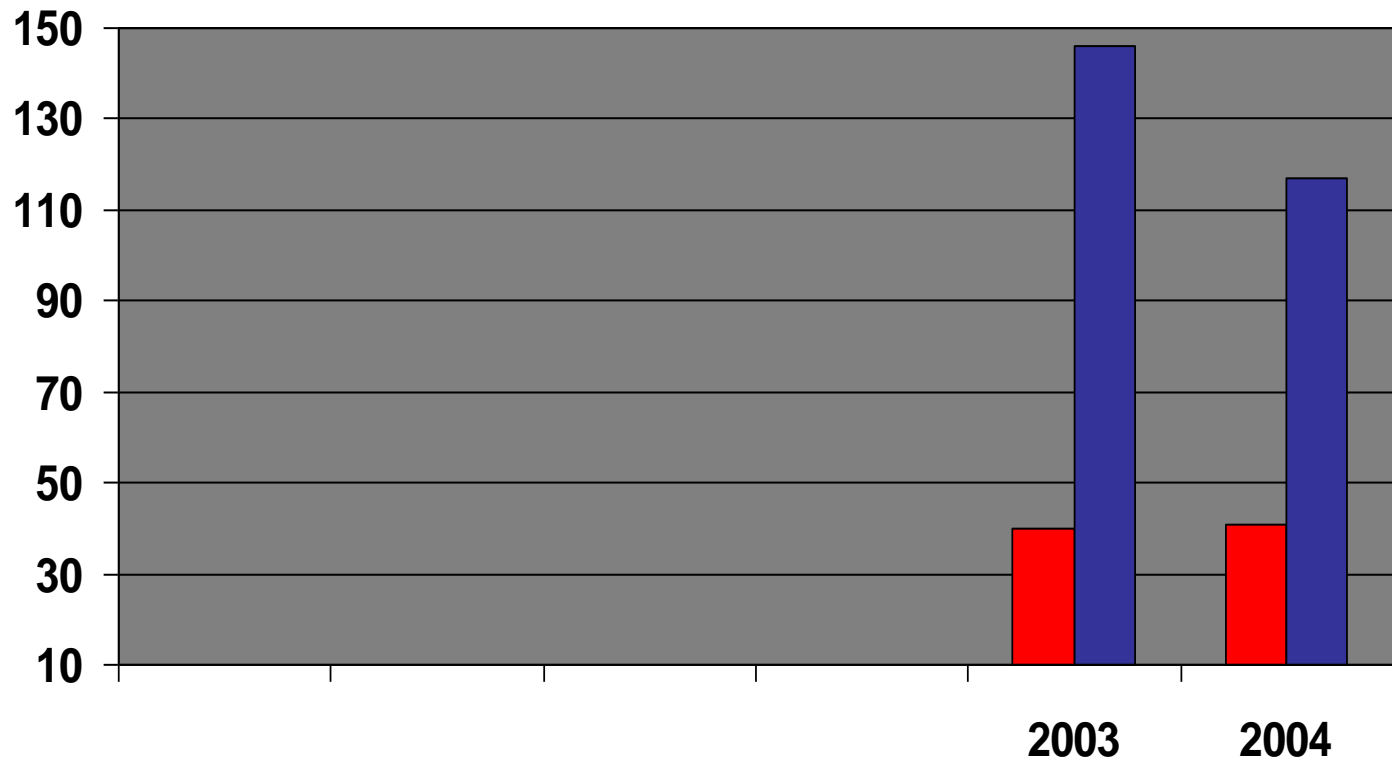
■ **EMS/Other** ■ **Heavy Apparatus** ■ **Primary Driver**

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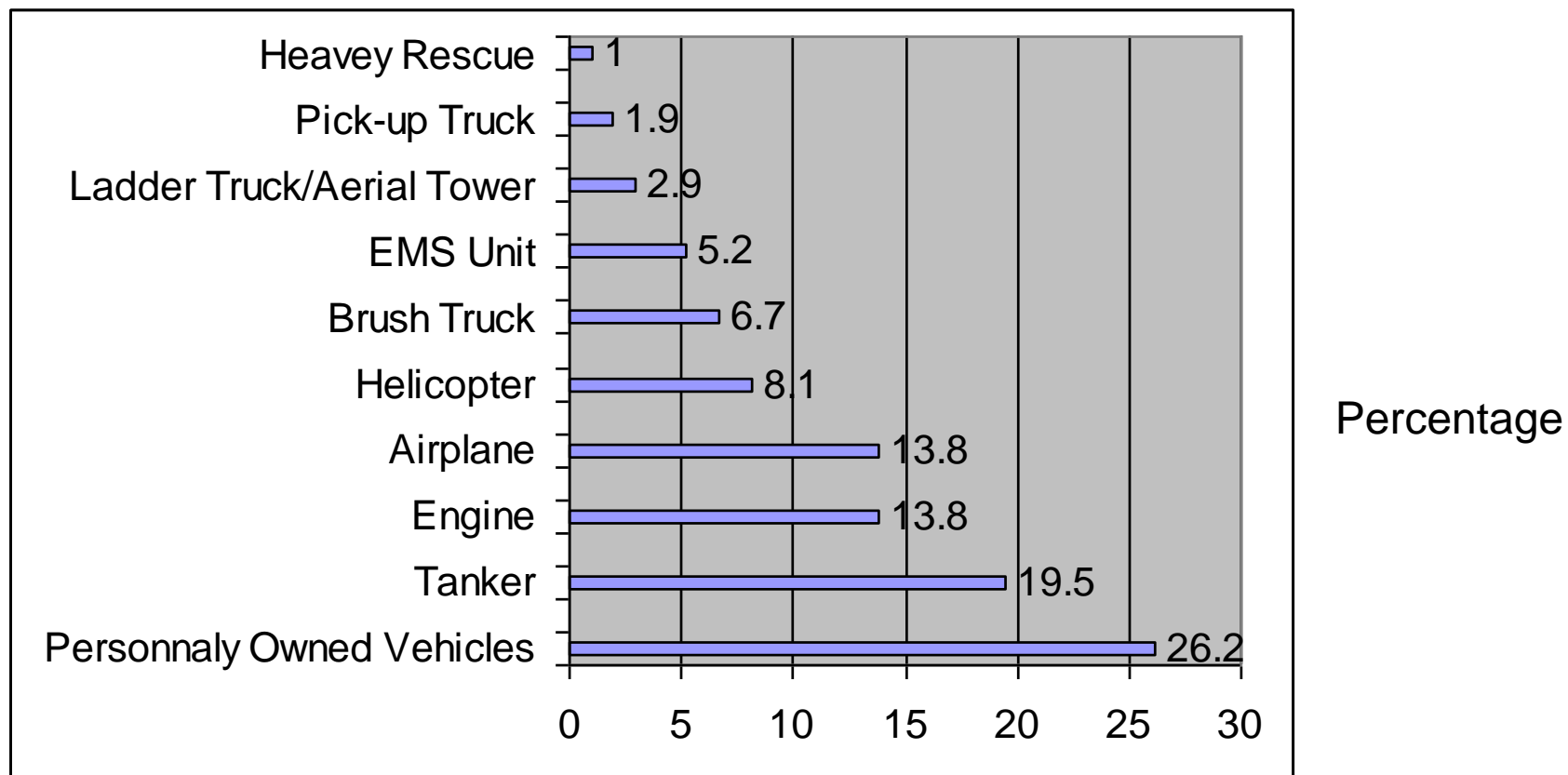
COLLISIONS INVOLVING SINGLE VEHICLE





Class "B" Apparatus Drivers Course

Type of Vehicle Involved in Fatal Collision (1990-2000)



U.S. Fire Administration



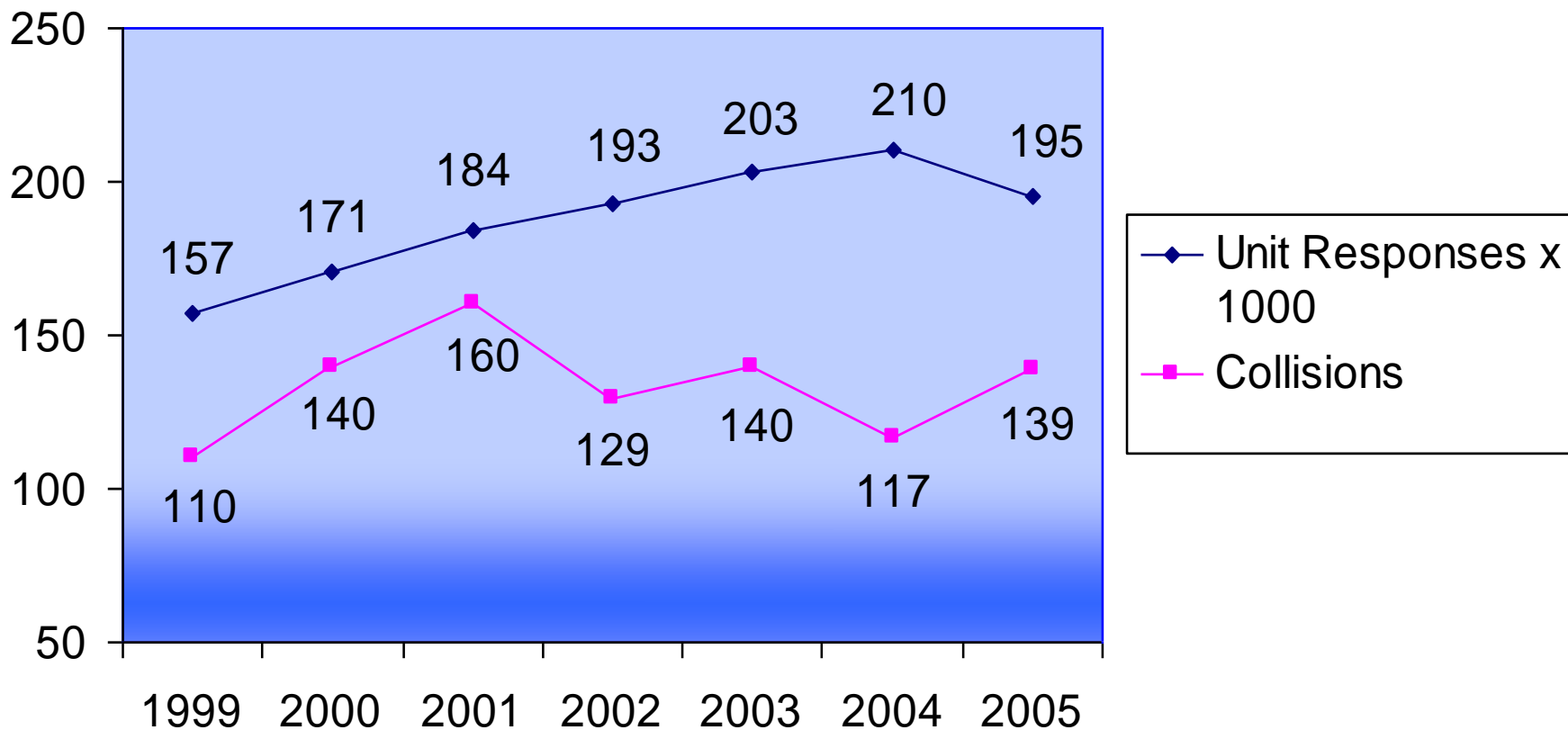
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Class "B" Apparatus Drivers Course

Unit Responses vs. Collision History





SEATS BELTS

- **We Require You To Use Them**
- **Your Spouse Expects You To Use Them**
- **Your Children and Family Need You To Use them**







Why Class “B” Apparatus Driver Course ?

Maryland MVA Law Change

- 16-102. Persons exempt from licensing requirements
- (12) A member or employee of a fire department, rescue squad, emergency medical service unit, or volunteer fire company while driving an emergency vehicle if the driver:





Why Class “B” Apparatus Driver Course ?

- (i) Holds a valid Class C license issued to the driver under section 16-104.1 of this subtitle;
- (ii) Has been authorized by then political subdivision that operates a fire department rescue squad, emergency medical services unit, or volunteer fire department to operate the type of emergency vehicle being driven; and





Why Class “B” Apparatus Driver Course ?

(iii) Is driving the emergency vehicle in the performance of the official duties of the driver in or out of state.





Why Class “B” Apparatus Driver Course ?

Regulation

(1) The Administration shall adopt regulations that establish mandatory training and testing requirements that a political subdivision that operates a fire department, rescue squad, emergency medical services unit, or volunteer fire department must implement before the political subdivision may authorize an individual to operate an emergency vehicle in accordance with subsection (a) (12) of this section.





Why Class “B” Apparatus Driver Course ?

Implement Standardized Driver Training

- Past Practices
 - Class “B” & “A” training at the station level
 - Inconsistent information
 - Focus was not on “Safe Driving”
 - Some personnel were “left out”





Class “B” Apparatus Drivers Course

Why Class “B” Apparatus Driver Course ?

Collision Reduction

MCFRS goal is to reduce frequency and severity of collisions involving MCFRS apparatus





May, 2005



March 29, 2005



July, 2005



Class “B” Apparatus Drivers Course

Class “B” Apparatus Driver Course



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NEW PHILOSOPHY

We drive our vehicles with the mindset that the other driver will make a mistake in the path of our vehicle.

Our operators will drive proactively by adjusting their driving to avoid collisions triggered by other drivers, traffic, and environmental conditions.





Driver and Officer Responsibility

- All drivers of emergency vehicles shall be directly responsible for the safe and prudent operation of the vehicle under all conditions.
- Driver's first priority shall be for the safe arrival of the emergency vehicle at the emergency scene.





Driver and Officer Responsibility

- Drivers shall not move emergency vehicles until all the personnel on the vehicle are seated and secured with seat belts and in approved riding positions.





Driver and Officer Responsibility

During emergency response, drivers of emergency vehicles shall be able to stop the vehicle to avoid a collision for any of the following:

- Red traffic lights
- Stop signs
- Negative right-of-way intersection
- Blind intersections
- When encountering a stopped school bus with flashing warning lights (complete stop)
- When the driver cannot account for all lanes of traffic in an intersection
- When other intersection hazards are present





Driver and Officer Responsibility

- During non-emergency travel, drivers of emergency vehicles shall obey all traffic control signals and signs and all laws and rules set forth by state or local jurisdiction.
- During emergency response or non-emergency travel, drivers of emergency vehicle shall come to a complete stop at all railroad grade crossings. DFRS Policy #808





Driver and Officer Responsibility

- The driver shall be aware of his/her rate of closure on other vehicles and pedestrians.
- Driver & Officer shall ensure that all personnel on the vehicle are seated and secured with seat belts and in approved riding positions prior to movement of the emergency vehicle.





Driver and Officer Responsibility

- Officer shall direct the driver to cease any unsafe driving, such as excess speed or unsafe intersection practices.
- Officer shall be responsible to operate the radio and communications equipment during response.





Driver and Officer Responsibility

- Driver & Officer shall ensure driver is operating the vehicle in a safe and prudent manner during response in accordance with departmental policy and state statutes.
- Officer shall issue warnings about road and physical hazards to the driver.





Driver and Officer Responsibility

- Officer shall operate the audio and visual warning devices.
- Officer shall check map book, run cards or computers aided response to assist the driver in determining the safest and most direct route to the emergency scene.





Driver and Officer Responsibility

- Officer shall assist the driver in intersection crossing and backing according to specific responsibilities outlined in the intersection and backing policies.





Maryland Vehicle Statutes

Review

- **TR 11-118 Emergency Vehicle**
 - **Vehicles of Federal, State or Local Law enforcement agencies;**
 - **Vehicles of fire departments, rescue squads, volunteer fire departments,**
 - **EMS systems and MD Fire & Rescue Institute**
 - **State vehicles responding to Haz-Mat spills**
 - **State vehicles designated by Commissioner of Corrections**
 - **Ambulances**
 - **Special vehicles funded or provided by governments and used for**
 - **emergency or rescue purposes in this State.**





Maryland Vehicle Statutes

- **TR 11- 162 Definition of STOP**
 - **Stop means complete cessation of movement.**
- **TR 19 – 103 Liability for Negligent Operation of Emergency Vehicle**
 - **An authorized Emergency Vehicle Operator who is using the vehicle in an actual emergency (i.e. responding to an emergency call, etc...) has immunity from Liability.**
 - **The owner or lease of an Emergency Vehicle is liable to an extent provided by 5-639 for any damages caused by a negligent act by the operator while using the vehicle in an actual emergency.**





Maryland Vehicle Statutes

TR 21 – 106 Emergency Vehicle Privileges

- **The driver of an emergency vehicle may:**
 - **Park or stand without regard to the law**
 - **Go through a red light, stop sign or yield after slowing for safety**
 - **Reasonably exceed the max. speed limit**
 - **Disregard any traffic control signal regarding turning or movement**
 - **(no left turn, not u-turn)**





Maryland Vehicle Statutes

TR 21 – 405 Operation of Vehicles on Approach of Emergency Vehicles

- **Upon approach of an emergency vehicle using audible and visual signals, or a police vehicle using a audible signal, the driver of every other vehicle shall yield right of way.**
- **Upon approach of an emergency vehicle, every other vehicle shall drive immediately to a position parallel to and as close as possible to the edge or curb of the roadway clear of any intersection.**





Maryland Vehicle Statutes

- **Stopping until emergency vehicle passed:**
Driver of every other vehicle shall stop and stay in that position until passed.
- **Passing of emergency vehicle:** **only allowed when directed by a police officer or when the vehicle has stopped.**
- **Driver must drive with due regard for safety of all persons.**





Maryland Vehicle Statutes

TR 21 – 510 Pedestrians to Yield Right – of – Way to Emergency Vehicle

- **A pedestrian who crosses a roadway shall yield right of way to any approaching emergency vehicle that is using audible and visual signals.**
- **This includes police vehicles using only a siren**
- **The driver of any emergency vehicle must still drive with due regard for the safety of all people.**





Maryland Vehicle Statutes

TR 21 – 706 Overtaking and Passing School Vehicle

- Driver to stop on meeting or overtaking stopped school vehicle: If a school vehicle has stopped on a roadway and operating stop lights, the driver of any vehicle meeting or overtaking the school vehicle shall stop at least 20 feet away in the front or rear of vehicle
- The driver of vehicle meeting or overtaking a school vehicle may not proceed until school vehicle resumes motion or deactivates red stop lights.
- Exception: does not apply to driver, if school vehicle is on different roadway.





Maryland Vehicle Statutes

TR 21 – 1003 Stopping, Standing or Parking Prohibited

Prohibited in:

Front of public driveway

On a sidewalk

In an intersection

On a crosswalk

In a highway tunnel

On any bridge





Maryland Vehicle Statutes

TR 21 – 1003 Stopping, Standing or Parking Prohibited

- Within 15ft. of a fire hydrant
- Within 30ft on approach to flashing signals, traffic control signal, side of roadway, stop sign, or yield sign.
- Within 20ft of driveway entrance to fire station
- Within 50ft of railroad crossing





Maryland Vehicle Statutes

TR 21 – 1110 Crossing Fire Hose

- Driver of vehicle may not drive over any unprotected fire hose of a fire department that is laid down on any highway or private driveway without consent of fire department official in command.





Maryland Vehicle Statutes

TR 22 -218 Audible and Visual Signals

- Every emergency vehicle must have a siren, exhaust whistle, or bell
- Emergency vehicles shall have signal lamps mounted as high as practicable. Must be visible at 500 ft. in normal sunlight.
- No person shall drive on any highway a vehicle equipped with oscillating, rotating, blinking, or other type of emission of light





Maryland Vehicle Statutes

TR 22 – 412.4 Seat Belts or Restraining Devices

- Vehicle registered & manufactured after 1990 shall be equipped with a seatbelt or safety restraining device for each position that may be lawfully occupied by a passenger.
- However, failure to use seatbelt or safety restraining device may not be considered evidence of negligence, may not be considered a moving violation, nor may civil action be taken.





Maryland Vehicle Statutes

- **“PRIVILEGE” and “EXEMPTION” demand due regard, care & caution by the Emergency Vehicle Operator**
- **“DUE” always imports a fixed obligation or liability.**
- **“CARE” refers to avoiding a collision**
- **“DUE AND REASONABLE CARE” refers to the “Doctrine of Reasonable Man”**





Legal Definitions

- “A **TRUE EMERGENCY** is a situation in which there is a high probability of death or serious injury to an individual or significant property loss, and action by (you) an emergency vehicle operator may reduce the seriousness of the situation.”

U.S. Department of Transportation

“Emergency Vehicle Operators Instructor Course Manual”





Legal Definitions

Negligence

- **A legal deficiency or wrong that results whenever a person fails to exercise that degree of care that a prudent person would exercise under similar circumstances**





Legal Definitions

Gross Negligence

- The reckless disregard of the consequences of an act of another person

Willful and Wanton

- Intentional or with careless indifference (considered the most serious form of negligence)





Class “B” Apparatus Drivers Course

Case Study

TW 17 Fatal Collision June 22, 2000



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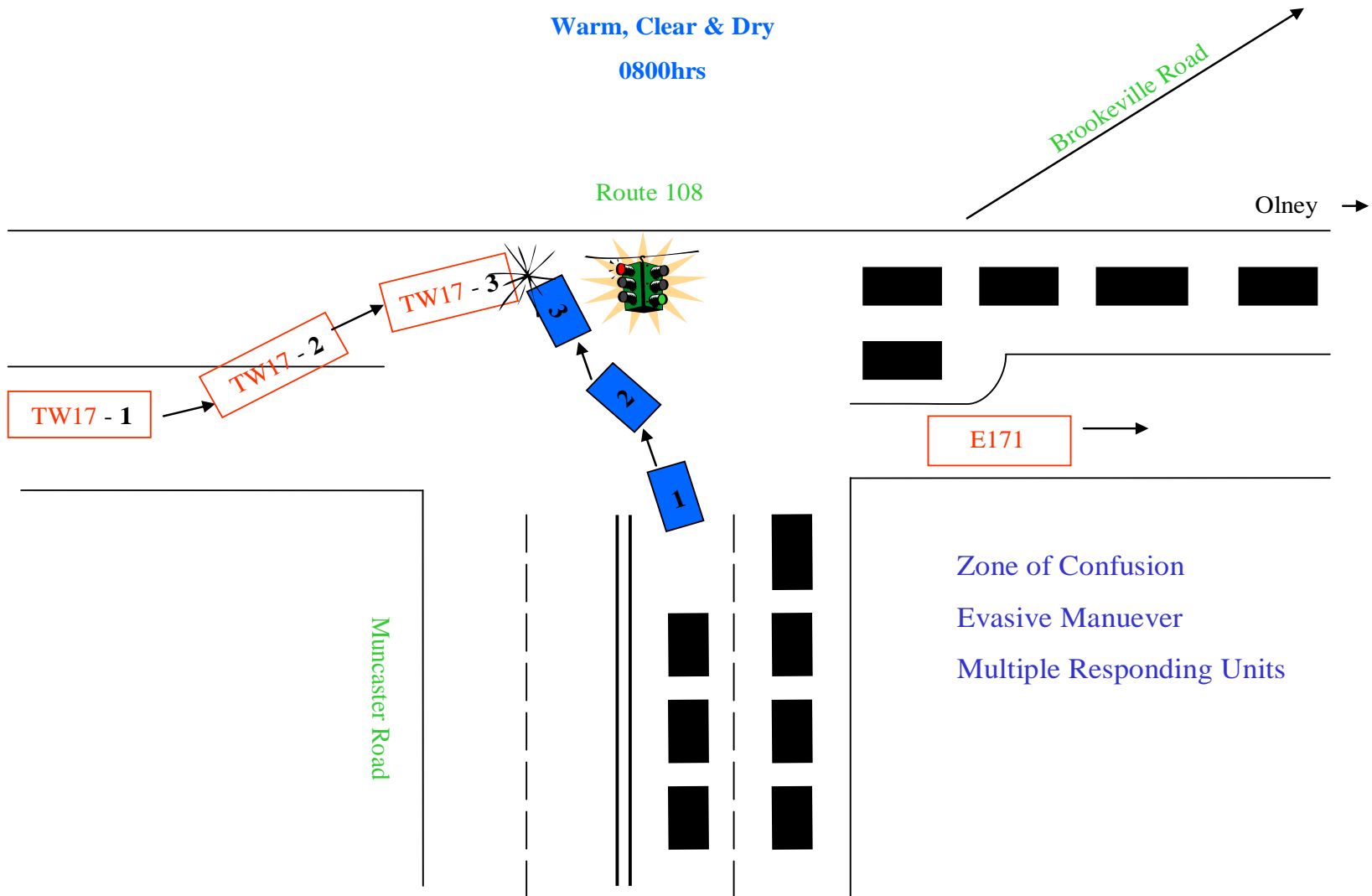


Class "B" Apparatus Drivers Course

June 22, 2000

Warm, Clear & Dry

0800hrs









AST
LAND
08
→

LOADING & UNLOADING
OPEN

LAYTONSVILLE
VOL. FIRE DEPT.

DO NOT RIDE
ON REAR STEP

TRAIL BLAZER

TRAIL BLAZER



EAST

MARYLAND

108



LONG & FOSTER
OPEN

LAYTONSVILLE
VOL. FIRE DEPT.

DO NOT RIDE
ON REAR STEP

TRAIL BLAZER

TRAIL BLAZER





Class “B” Apparatus Drivers Course

Safe Emergency Vehicle Operation Policy # 808

Review Policy Now



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Vehicle Backing

- If you can avoid backing, don't do it!
- Never be in a hurry when backing.
- If there is no spotter available:
 - Reconsider backing up. Is it really necessary?
 - Make a reasonable attempt to get someone to act as a spotter.
 - If a spotter cannot be obtained, get out the unit and walk around the unit completing a "circle of safety" and survey the backing area. Before proceeding to back unit, being sure to also check overhead clearance.
 - Give a final warning of two horn blasts just prior to backing.





Vehicle Backing

Driver Responsibilities

- Bring the unit to a complete stop.
- Roll window down completely.
- Make visual and verbal contact with the spotter. “If you cannot see or hear the spotter, do not backup!”





Vehicle Backing

Driver Responsibilities

- Driver and spotter must establish and continue eye contact in the left rear view mirror at all times.
- Drivers must have a thorough knowledge of spotter hand signals.
- The spotter hand signals to the driver indicating it is safe to begin backing.
- The driver gives a two blast warning on the horn just prior to backing.





Vehicle Backing

Spotter Responsibilities:

- Conduct a "circle of safety" and survey the backing area and all other sides of the vehicle checking for hazards. Before proceeding to back unit, being sure to also check overhead clearance.
- Communicate any observed hazards to the driver.
- Place yourself eight to ten feet to the left rear of the unit. Try to observe both sides of the vehicle





Vehicle Backing

Spotter Responsibilities:

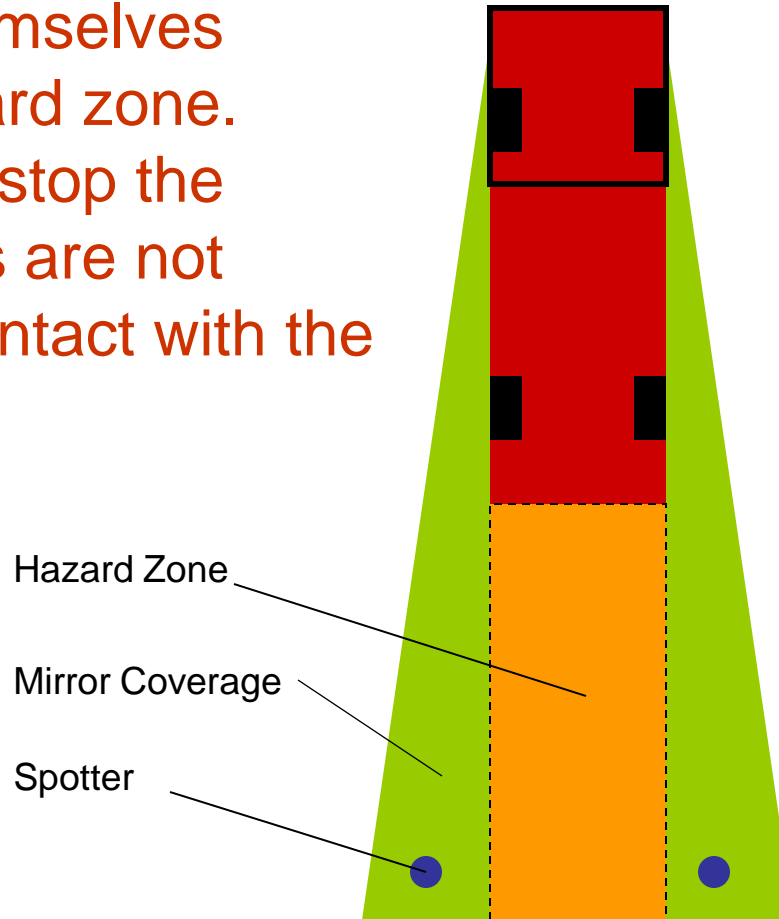
- Establish visual and verbal contact with the driver and continue eye to eye contact in the left rear view mirror at all times.
- Be familiar with hand signals before allowing backing maneuvers to begin.
- Stop the driver if any hazards are observed or if you are uncertain of the direction that the driver is maneuvering.





SAFE SPOTTING

Spotters position themselves outside the rear hazard zone. The operator should stop the vehicle if the spotters are not visible or lack eye contact with the mirror.





At Risk Behaviors

- Weight Restricted Bridges
- Distracted Drivers
- Influence of Drugs and Alcohol
- Emotional Drivers





Class “B” Apparatus Drivers Course

Review

- Why Class “B” Driver Course
- Driver & Officer Responsibility
- Motor Vehicle Statutes
- Legal Definitions
- Safe Vehicle Operation Policy
- Safe Driving Principles/At Risk Behaviors





Class “B” Apparatus Drivers Course

DRIVING RANGE RULES AND REGULATIONS



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Class “B” Apparatus Drivers Course

Emergency Vehicle Operator's must not lose sight of the fact that controlled/monitored range activities are designed to simulate actual operational conditions. Speeds are controlled for the roadway conditions. During actual emergency responses, conditions, roadway dynamics, an Emergency Vehicle Operator's attitude will be dramatically altered. This is when a crash might occur.





OBJECTIVES

THE STUDENT WILL BE ABLE TO:

- Orally explain applications of rules and procedures during driving range exercises
- Demonstrate applications of rules and procedures during driving range exercises





OVERVIEW

- Safety Rules
- Straight Line & Diminishing Lane Clearance
- Turning Around
- Stall Parking/Front
- Stall Parking/Alley Dock
- Lane Change/Off set Alley
- Serpentine/Forward & Reverse
- Parallel Parking





Class “B” Apparatus Drivers Course

The proper use of mirrors can't be emphasized enough. EVs are bigger, and slower, and occupy more lane space. Consequently other drivers will make attempts to pass and drive in blind spots. The outside mirrors are the only source which will allow the EVO to see what's next to and behind the vehicle.





SAFETY RULES

- Headlights are on at all times.
- No vehicles/ drivers on range during exercise. Except Back up & Safety
- All vehicle safety belts will be worn.
- Resetters wear safety vests.
- Fire extinguishers on all active vehicles.
- Maximum speed 15-25 mph.
- Signal driver by verbal and/or visual.





SAFETY RULES

- Vary cone space to accommodate vehicle.
- All vehicles are inspected PRIOR to use on the range.
- Dress appropriately for the weather.
- Have a safety officer.





SAFETY RULES

- Maintain secure area for exercises.
- Set up uniform hand signals for backing
- Monitor use of range safety equipment.
- Control all people & vehicles on range.
- Alert lead instructor of unsafe conditions
- Stop all unsafe activities immediately.





Class “B” Apparatus Drivers Course

Pivot Point



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DIMINISHING LANE

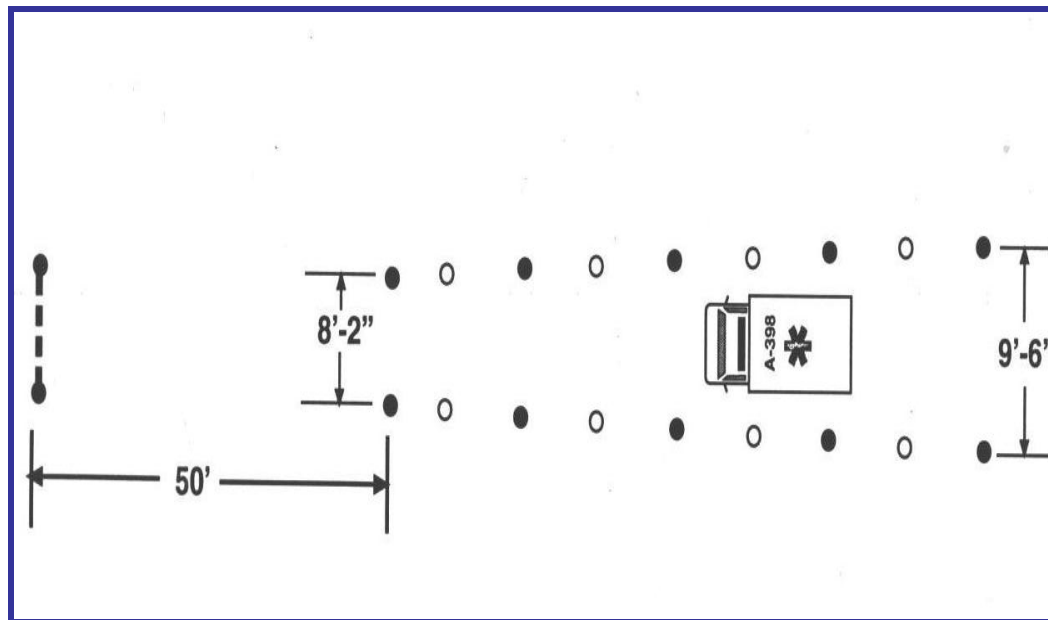
- Measures the Emergency Vehicle Operator's ability to:
 - Steer emergency vehicle in a straight line while backing
 - Judge distance to objects
 - Stop within one foot of an object
- Provides practice in:
 - Negotiating a narrow track with a wide vehicle
 - Maintaining a straight path of travel





Class "B" Apparatus Drivers Course

DIMINISHING LANE CLEARANCE



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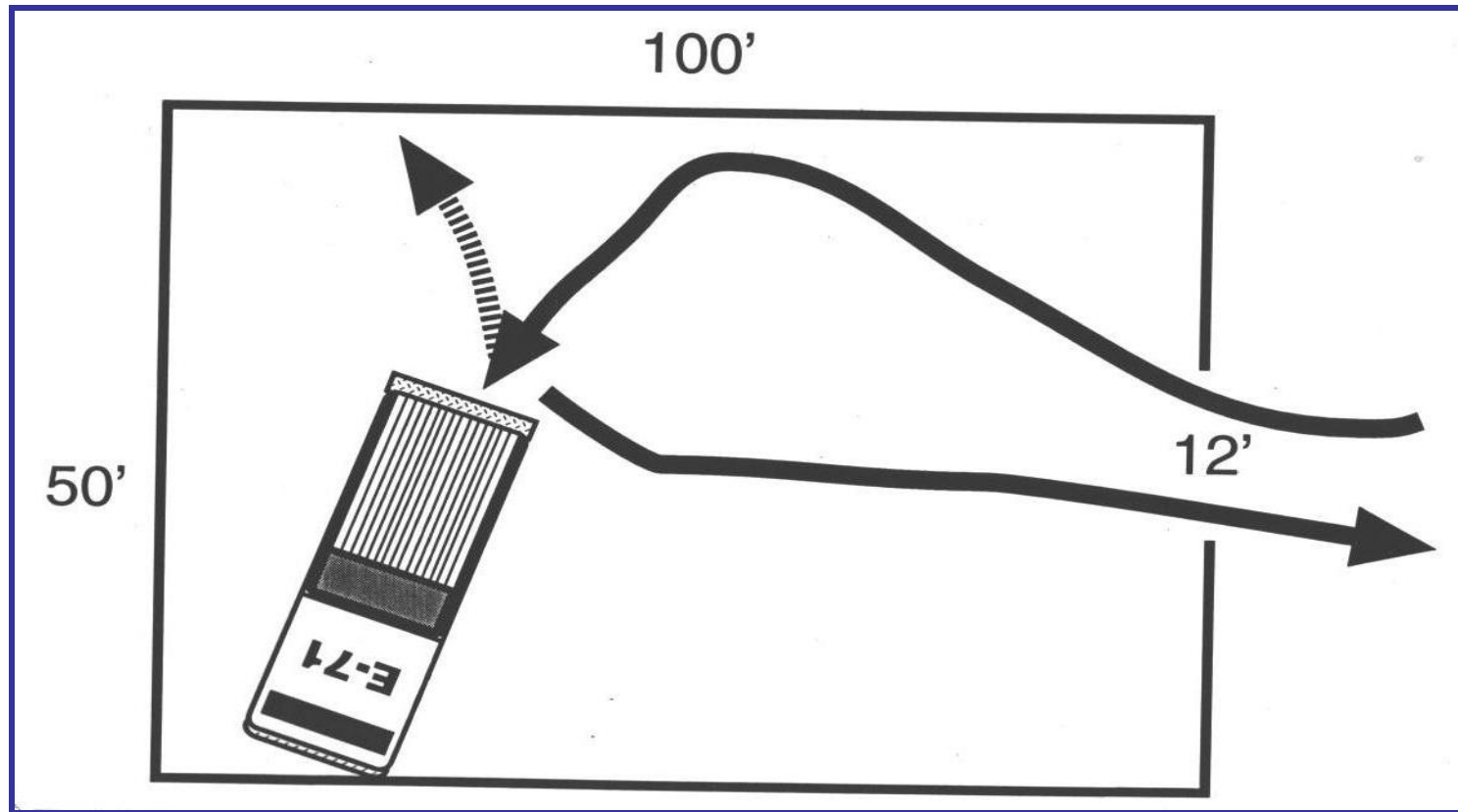
TURNING AROUND

- Measures Emergency Vehicle Operator’s ability to turn Emergency Vehicle around in a confined space to move or reposition.
- Provides practice in pulling into a narrow space and backing up.
- Helps develop valuable skills for making various types of turnabouts.





CONFINED SPACE TURN AROUND





STALL PARKING

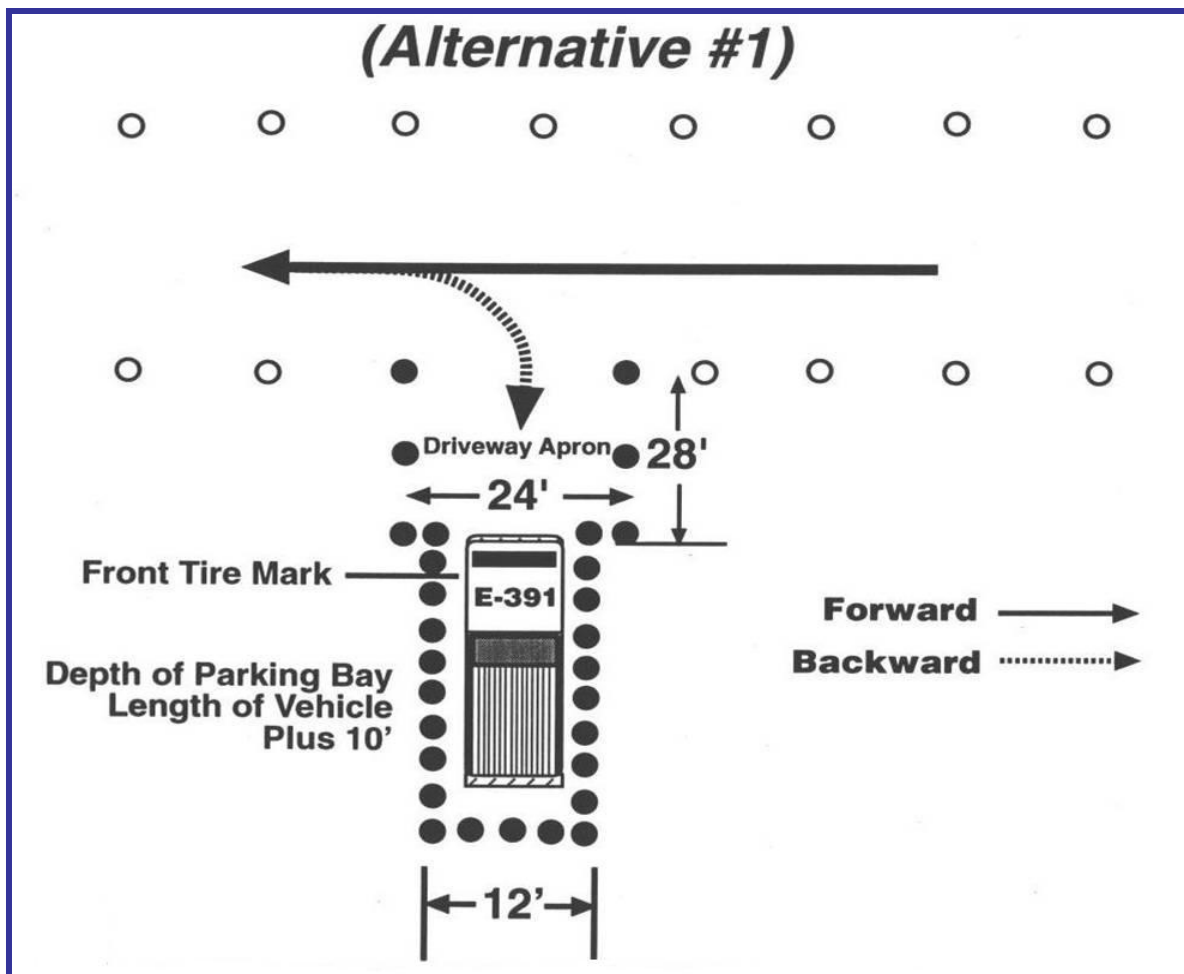
Measures Emergency Vehicle Operator's Ability To:

- Drive past a docking bay, reverse direction, and back into the space.
- Back down a confined area/ street with vehicles on either side.





STALL PARKING EXERCISE





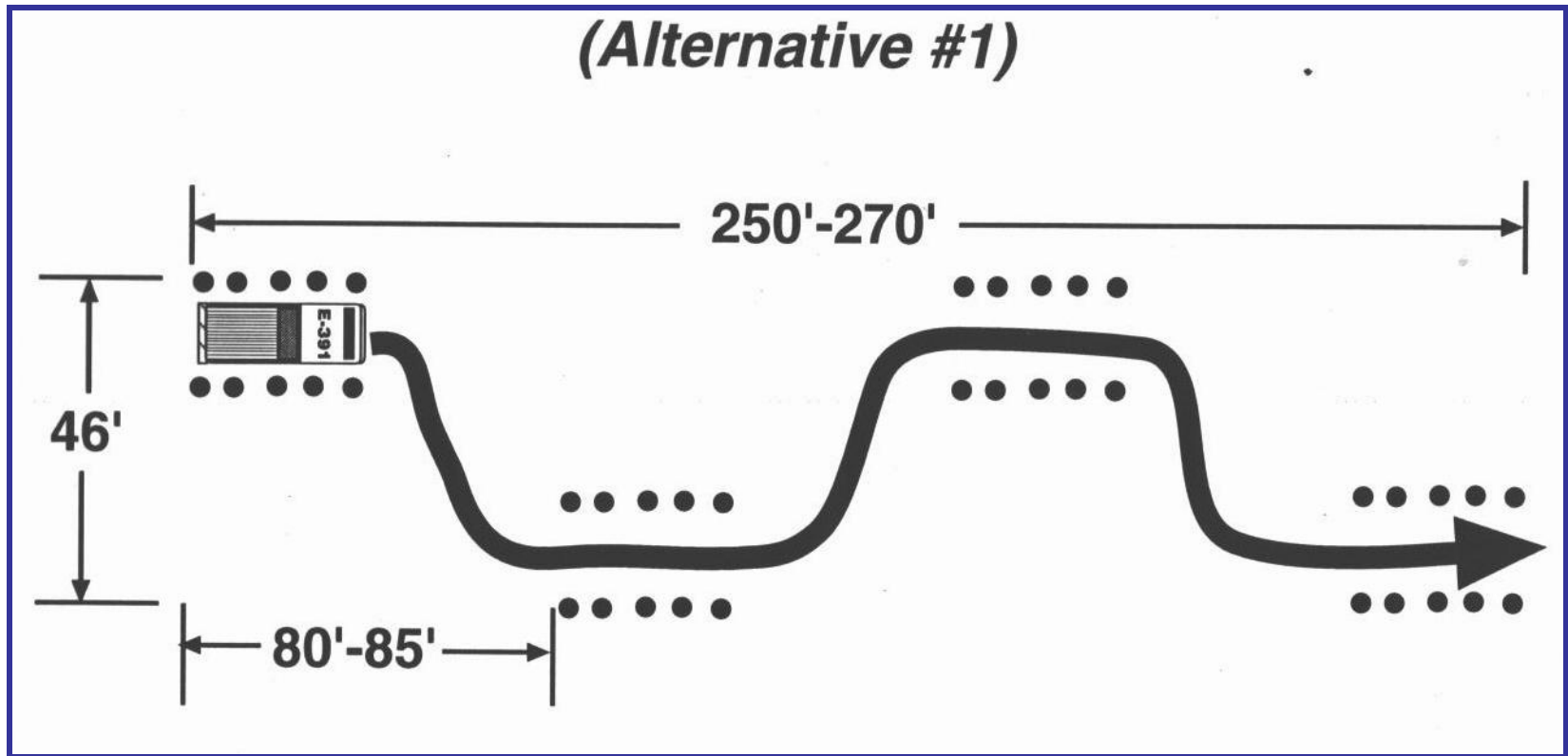
LANE CHANGE/OFF SET ALLEY

- Measures Emergency Vehicle Operator's ability to make sharp turns & steer the Emergency Vehicle in close boundaries.
- Provides practice in making right & left turns, and establishing precise alignment.
- Easier to stop <25 mph; swerve >25 mph





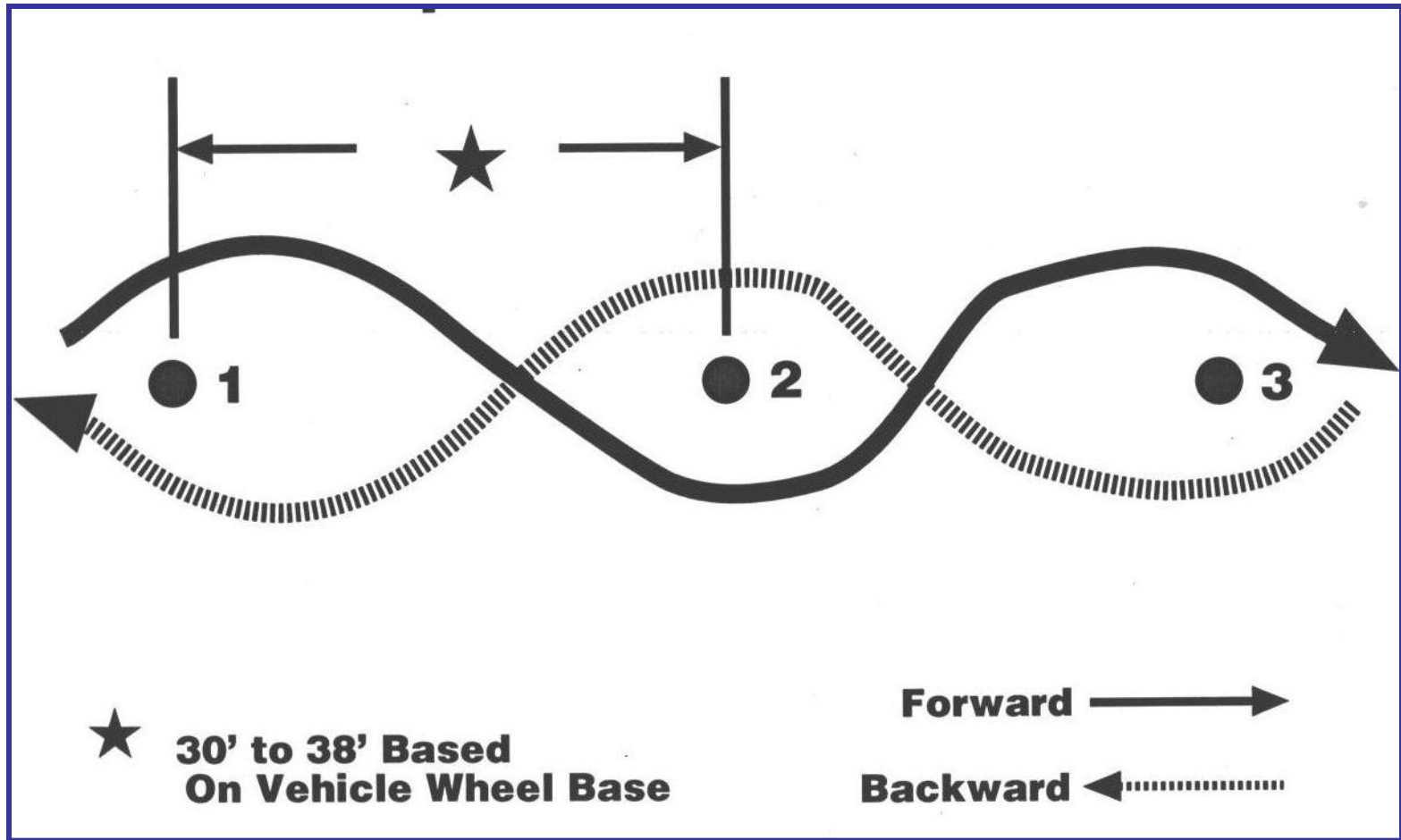
LANE CHANGE





Class "B" Apparatus Drivers Course

SERPENTINE EXERCISE





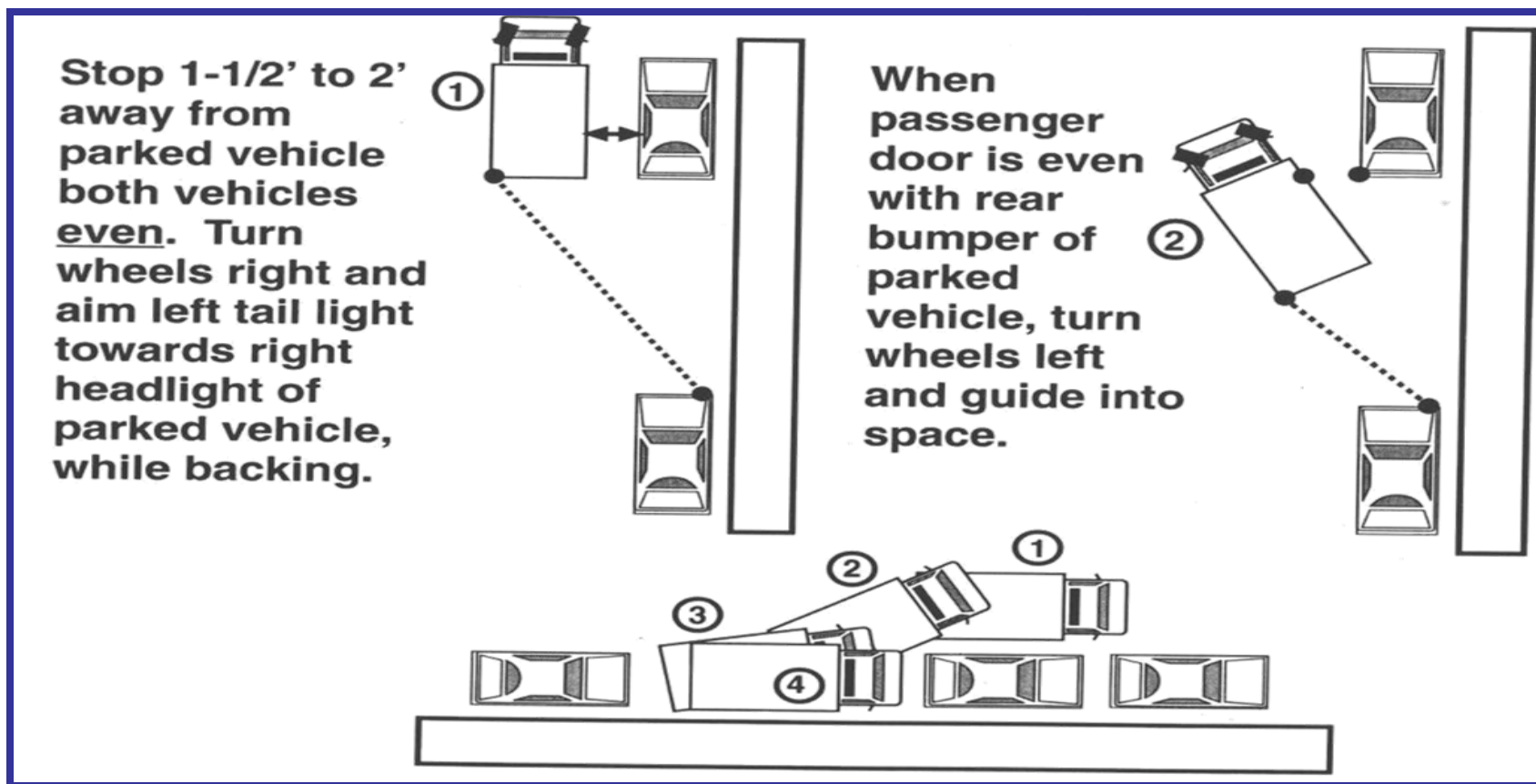
SERPENTINE EXERCISE

- Measures ability of Emergency Vehicle Operator to steer within close quarters without stopping.
- Sets the stage for responses with left/right lateral evasive maneuvering.





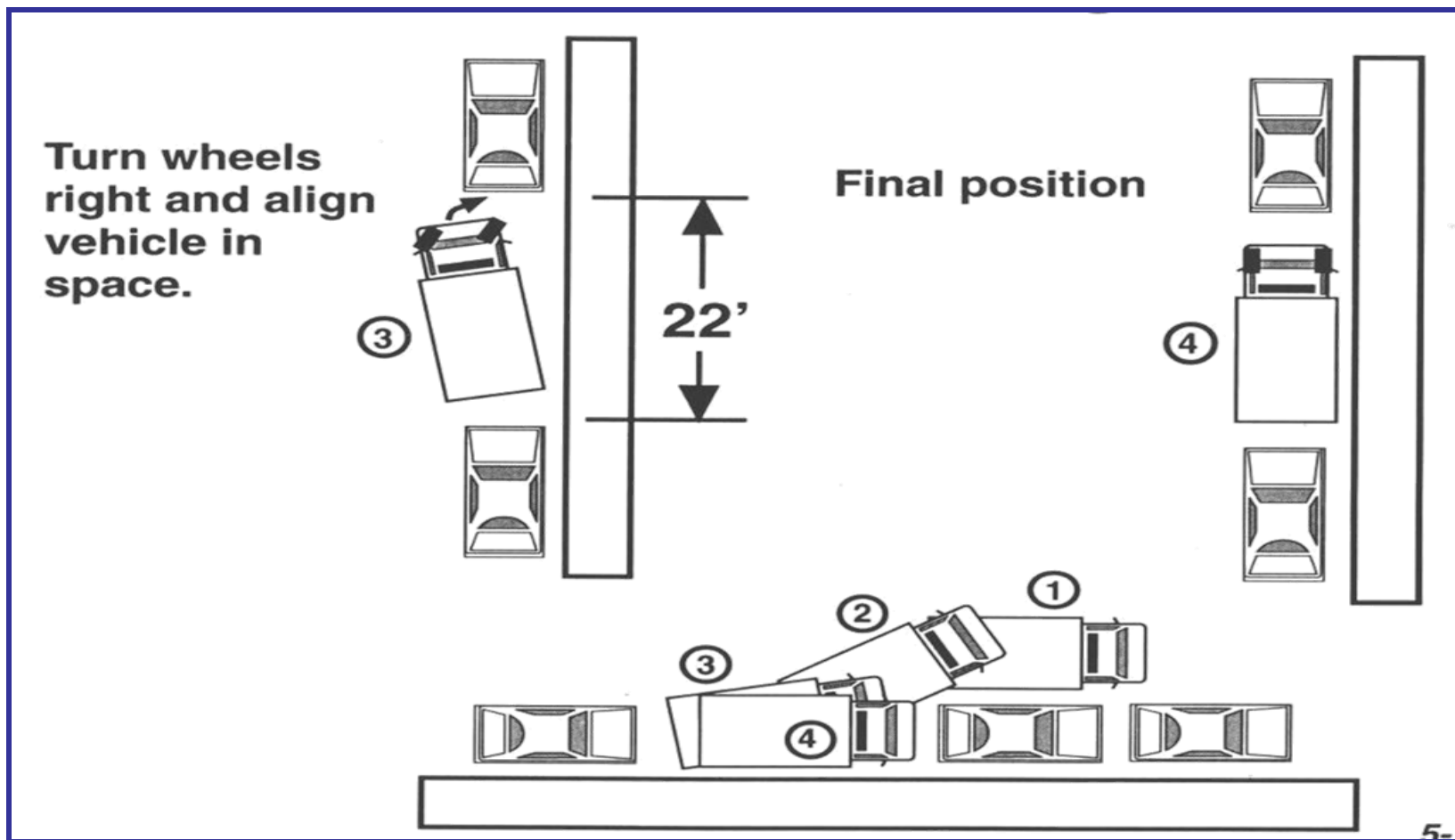
PARALLEL PARKING





Class "B" Apparatus Drivers Course

PARALLEL PARKING





REVIEW

- Safety Rules
- Straight Line & Diminishing Lane Clearance
- Turning Around
- Stall Parking/Front
- Stall Parking/Alley Dock
- Lane Change/Off set Alley
- Serpentine/Forward & Reverse
- Parallel Parking

